APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,993	01/30/2004	David Bargeron	MCS-037-04/305421.01	4524

			EXAMINER
27662	7590	09/25/2006	VAUGHN, GREGORY J

MICROSOFT CORPORATION
C/O LYON & HARR, LLP
300 ESPLANADE DRIVE
SUITE 800
OXNARD, CA 93036

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2178	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40,61 and 90* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40,61 and 90* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
                                                       Paper No(s)/Mail Date. _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   6) ☐ Other: _____ .
     Paper No(s)/Mail Date _____ .

DETAILED ACTION

Action Background

1.   This action is responsive to the applicant's election, amendment and response, filed on 6/15/2006.

2.   Applicant has cancelled claims 41-60, 62-89 and 91-98.

3.   Claims 1-40, 61 and 90 are pending in the case, claims 1, 61 and 90 are independent claims.

Election/Restrictions

4.   Applicant's election without traverse of Group I (including claims 1-40, 61 and 90) in the reply filed on 6/15/2006 is acknowledged. This restriction is made Final.

Priority

5.   Applicant's claim for domestic priority of US provisional application 60/488,169, filed May 7/17/2003, under 35 U.S.C. 119(e) is acknowledged.

Specification

6.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

8.   The USPTO "Interim Guidelines for Examination of Patent Applications for

Patent Subject Matter Eligibility" (Official Gazette notice of 22 November

2005), Annex IV, reads as follows:

"Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101."

9.   Claims 1-4, 20-29, 30-40, 61 and 90 are rejected under 35 U.S.C. 101

because the claimed invention is directed to non-statutory subject matter.

10.   **Regarding claim 90**, the claims define a computer readable medium with

descriptive material. While "functional descriptive material" may be claimed as

a statutory product (i.e., a "manufacture") when embodied on a tangible

computer readable medium, the specification defines a computer readable

medium as also encompassing a signal (see page 11, lines 30-31 of the

originally filed specification). Therefore the claim does not limit itself to statutory embodiments, because a signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, a "signal" is a form of energy, in the absence of any physical structure or tangible material.

11.   **Regarding claims 1-4, 20-29, 30-40, 61 and 90**, the claimed invention fails to produce a tangible result. The claimed invention as a whole must accomplish a practical application. That is, it must produce a *"useful, concrete and tangible result." State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. (See MPEP 2106.). Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459.

Applicant's invention is directed toward paginating document content. Claim 1 incorporates a template storage unit, a layout engine and a paginator, where the layout engine determines a score for fit of content into the template, and the paginator determines a desirable pairing of the content and the template. Claims 61 and 90 are directed toward laying out content using a template, evaluating a template score, determining a number of windows and orphans, calculating a score, and choosing a sequence of templates.

Applicant's claims describe the steps taken to manipulate (i.e. store, determine, laying out, evaluating, calculating and choosing) the nonfunctional descriptive material (i.e. the document content and templates), but fail to describe a tangible result of the paginating operation. Storing, determining, laying out, evaluating, calculating and choosing are abstract ideas manipulated within the internal structure of the computing device, and therefore are not patentable. However, claim 5 is directed toward a tangible result. Claim 5 incorporates a user display, to display output to a user, which is a tangible result of the invention.

Claim Rejections - 35 USC § 112

12.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13.   Claims 1-40, 61 and 90 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

14.   **Regarding independent claims 1, 61 and 90**, the claims are directed toward "*determining a score that is a measure of how well document content*

fits a template" (claim 1) and "*evaluating a template score variable of the template using the portion of document content*" (claims 61 and 90). However, the specification is silent as to how a score is determined. Page 21, lines 19-21 and page 25, lines 9-26 are directed toward the "scoring" limitation (see also Figure 7B, at reference sign 721, and Figure 10, reference signs 1003 and 1009), but the description found therein fails to enable one of ordinary skill to make and/or use the invention.

15.   **Regarding claims 2-40**, the claims are rejected for fully incorporating the deficiencies of the base claim.

16.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> "*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. "*

17.   Claims 1-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

18.   **Regarding claim 1**, the actual components of the system do not form a nexus with the recited preamble, as a grid-based document layout is not a result of the claimed invention.

19.   **Regarding claim 1**, the term "*desirable*" is a relative term, which renders the claim indefinite. The term "*desirable*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite

degree, and one of ordinary skill in the art would not be reasonably apprised

of the scope of the invention.

20.   **Regarding claims 2-40**, the claims are rejected for fully incorporating the

deficiencies of the base claim.

Claim Rejections - 35 USC § 102

21.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> "A person shall be entitled to a patent unless –
>
> (e) The invention was described in (1) an application for patent, published
> under section 122(b), by another filed in the United States before the
> invention by the applicant for patent or (2) a patent granted on an
> application for patent by another filed in the United States before the
> invention by the applicant for patent, except that an international
> application filed under the treaty defined in section 351(a) shall have the
> effects for purposes of this subsection of an application filed in the United
> States only if the international application designated the United States
> and was published under Article 21(2) of such treaty in the English
> language."

22.   Claims 1-40, 61 and 90 are rejected under 35 U.S.C. 102(e) as being

anticipated over Salesin et al. US Patent publication 2003/0229845, filed

5/30/2002, published 12/11/2003 (hereinafter Salesin).

23.   **Regarding independent claim 1**, Salesin discloses an adaptive

document layout system. Salesin recites: "*This invention is directed toward a

system and process for adaptive document layout*" (paragraph 2). Salesin

discloses a plurality of templates. Salesin recites: "*FIG. 16l shows one simple benefit of using XSL templates to specify a document's style*" (paragraph 160). Salesin discloses determining a score as a measure of how well the document content fits the template and determine a desirable pairing of document content with the templates. Salesin recites: "*To render each pane, the pane size, alternate versions of content, and attributes of the content to be rendered are input into the system. Each version of text content is evaluated to find the best line breaking solution for each version of alternate content, providing a text breaking goodness score for each version*" (paragraph 23).

24. **Regarding dependent claim 2**, Salesin discloses a plurality of templates. Salesin recites: "*using XSL templates*" (paragraph 160).

25. **Regarding dependent claim 3**, Salesin discloses the quality score as an optimization problem, which seeks to optimize a second quality score across interdependent elements of the template. Salesin recites: "*More recently, researchers have begun to focus on the page layout problem, whereby relational grammars [11], constraints [1, 2, 3, 4, 5], or various forms of optimization [13] are used to arrange different elements onto a page while satisfying some notion of "goodness*" (paragraph 9) and "*Each version of text content is evaluated to find the best line breaking solution for each version of alternate content, providing a text breaking goodness score for each version*" (paragraph 23).

26.   **Regarding dependent claim 4**, Salesin discloses the use of style sheets.

Salesin recites: *"the World-Wide-Web Consortium (W3C), have emerged to*

support the decoupling of a document's content from its stylistic formatting

rules, most notably the Extensible Stylesheet Language (XSL) and Cascading

Style Sheets (CSS) [9]. A constraint-based version of Cascading Style Sheets

(CCSS) has also been proposed [1]" (paragraph 9).

27.   **Regarding claim 5**, Salesin discloses an authoring tool and a user

interface. Salesin recites: *"The specific content is selected and formatted*

dynamically, on the fly, by a layout engine in order to best adapt to a given

viewing situation. A user interface for authoring and editing such manifold

content is disclosed" (abstract).

28.   **Regarding claims 6 and 7**, Salesin discloses templates where a child

template inherits characteristics from a parent template (claim 6) and where

the inherited characteristics are guidelines, elements, constraints and

preconditions (claim 7). Salesin discloses cascading style sheets (as

described above), which include the capability of inheriting characteristics

from parent style sheets. Salesin discloses constraints and preconditions (as

described above). Salesin discloses guideline and element characteristics in

Figures 16A and 16B.

29.   **Regarding claims 8-10**, Salesin discloses the use of attribute

preferences. Salesin recites: *"This content is then selected and formatted*

dynamically to fit the viewing situation--that is, the display device being used,

as well as, potentially, any additional preferences or constraints, such as the preferences of the reader (for example, for a large-text display or for a summary view), or constraints on the available computing power or bandwidth" (paragraph 12).

30. **Regarding claims 11 and 12**, Salesin discloses templates in a recursive template configuration, where one template is nested within another template. Salesin discloses cascading style sheets as described above. Cascading style sheets provide capabilities for the recursive application of style sheets, and nesting of style sheets.

31. **Regarding claim 13**, Salesin discloses a global layout parameter. Salesin recites: *"The overall layout goodness score includes a constant value as a penalty for falling outside of the valid viewing range at all, and a weighted value proportional to how far outside of the range the parameter is"* (paragraph 24).

32. **Regarding claim 14**, Salesin discloses combining characteristics of a first and second template. Salesin discloses cascading style sheets (as described above). Cascading style sheets allow characteristics from multiple style sheets to be combined.

33. **Regarding claim 15**, Salesin discloses user added attribute preferences. Salesin recites: *"The adaptive document layout system and method allows manifold representations of content--that is, multiple versions of anything that*

might appear in a document, whether it be text, graphics, images, or even such things as stylistic conventions or user interface controls" (paragraph 12).

34.   **Regarding claims 16-19**, Salesin discloses arranging elements within the template. Salesin recites: "*The system of claim 33 wherein said alternate versions of content are organized using a tree data structure employing OR nodes to arrange said alternate versions of content*" (claim 38).

35.   **Regarding claim 20**, Salesin discloses a layout element that defines a particular region within a layout. Salesin recites: "*The system then looks for a document sub-tree that can exactly generate the region of selected document content*" (paragraph 16). The balance of the claim limitations are directed toward the limitations of claims 7 and 16 combined, and are rejected using the same rationale.

36.   **Regarding claim 21**, the claim is directed to the same subject matter as claim 4, and is rejected using the same rationale.

37.   **Regarding claim 22**, the claim is directed to the same subject matter as claim 2, and is rejected using the same rationale.

38.   **Regarding claims 23 and 25**, Salesin discloses variable types of content. Salesin recites: "*As content nodes of different specific types are encountered, calls are made to an appropriate layout engine to determine the size of the panes within a page. Once the pane sizes are determined, the portion of the*

document represented by the content node is rendered in each pane"
(paragraph 114).

39.   **Regarding claim 24**, Salesin discloses the z-ordering of content in Figures 15A and 15B.

40.   **Regarding claims 26-29**, Salesin discloses the use of constraints and preconditions as described above.

41.   **Regarding claims 30-40**, Salesin discloses multiple content streams, that are combined, evaluated to determine a score, with preconditions and constraints, as described above.

42.   **Regarding claim 61**, the claim is directed toward a method for the system of claim 1, and is rejected using the same rationale. Claim 61 is further directed toward a determining step for the number of windows and orphans in the page layout. Salesin anticipates the limitation. Salesin recites: "*Additionally, a score is computed for the formatting of each line of text, the occurrence of any orphaned text or figures and compliance to any user preferences*" (paragraph 25).

43.   **Regarding claim 90**, the claim is directed toward a computer readable medium for the method of claim 61, and is rejected using the same rationale.

Conclusion

44.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Gregory J. Vaughn whose telephone

number is (571) 272-4131. The examiner can normally be reached Monday to

Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124.

The fax phone number for the organization where this application or

proceeding is assigned is (571) 272-2100.

Information regarding the status of an application may be obtained from

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access to the Private PAIR system, contact the Electronic Business Center

(EBC) at 866-217-9197 (toll-free).

Gregory J. Vaughn
Patent Examiner
September 5, 2006